are clearly and succinctly expressed. Attention is paid to items which appeared in the literature only less than a year ago. Naturally in the space available it was impossible to provide a complete coverage of all published items. The limitations of a short monograph have also made it necessary for Dr. Deuchar to be a bit cavalier in her treatment of some still highly controversial subjects, such as the relationship of mitochondria to the synthesis of yolk granules, or the interpretation of work with artificial inducing materials. There are a few places in which she does not seem quite to have grasped the crucial issues of the most recent work. For instance, there is no reference in the index to ribosomes, and her discussion of the nucleolarless mutant of *Xenopus* gives what has now turned out to be a rather misguided account of nucleolar function. However, it would be almost impossible for any book, even with the minimum time expended on its printing and production, to be fully up to date with the most recent advances. Dr. Deuchar's monograph will certainly provide an extremely valuable introduction to the whole subject, though the specialists will then wish to go to fuller accounts of the detailed fields which she sketches in.

C. H. WADDINGTON

GENETICS

Whitehouse, H. L. K. *Towards an Understanding of the Mechanism of Heredity.* London, 1965. Arnold. Pp. xii+372. Price 55s.

IN RECENT YEARS there has been a tendency in some textbooks of genetics to allow modern ideas concerning gene action to overshadow the experimental evidence upon which basic ideas in genetics are founded. Little consideration for example, is usually given to the chiasmatype theory or to the evidence which led to the rejection of the idea that genes were discrete entities arranged on the chromosome like beads on a string. Dr. Whitehouse deals with these matters and many others in his book, the purpose of which has been to present the important evidence upon which current beliefs concerning the mechanism of heredity are based. The main emphasis is on experimental evidence and little space is devoted to speculation and conjecture.

The evidence presented covers the whole field of genetics. Roughly half the book deals with those classical experiments and observations which led to the basic concepts in genetics, the remainder is concerned with recent evidence regarding the chemical nature of the gene, the genetic code, and current ideas concerning gene action. The evidence is well assembled and presented in a readily accessible manner.

The book has been carefully written and great trouble taken to avoid scientific inaccuracies but, perhaps because of the complex nature of the subject matter, it is not light reading. Mention might have been made of allosteric activation (as distinct from inhibition), and more time spent on the effects of hormones in regulating gene activity (apart from work on insect larvae); the most convincing experimental evidence in favour of the Lyon hypothesis is not mentioned. However, apart from a few such small points, the book forms a very extensive coverage of the subject, and the author states quite clearly in which fields our knowledge is still far from complete, as for example the organization of chromosomes particularly with regard to their replication.

In summary, this is a scholarly presentation of the evidence for current beliefs concerning the mechanism of heredity. It fulfils an important need and should prove particularly valuable to University students and those concerned with teaching genetics.

ALAN E. H. EMERY

Lüth, Paul. *Schöpfungstag und Mensch der Zukunft: Die Entwicklung der modernen Genetik.* Düsseldorf-Köln, 1965. Eugen Diederichs Verlag. Pp. 350. Price DM 14.80.

THE AUTHOR, a German physician, describes in his preface how he had to learn human genetics as a medical student under Hitler and how he later on set out to clarify and purge his ideas. The result is a creditable book, which describes not only the historical development of genetics and evolutionary theory but also the racialist and antisocial movements which were and still are a product of the misunderstanding and falsification of some of the results of those sciences. The English reader may find the book

somewhat discursive and diffuse, but on the other hand it does not suffer from the split between the two cultures and does not—as do some of our own popularizations—produce a detailed and elegant picture of a limited speciality—only to leave the reader to draw his own wrong-headed conclusions.

Covering a vast field of knowledge and a great span of time, and not working at a university, the author mostly had to draw on secondary sources. However, by submitting the manuscript to expert friends, he has avoided any glaring mistakes although there occur some errors and misconceptions. To the reviewer the most interesting parts of the book are those dealing with the contemporary efforts of racialists and with the speculations concerning the future of our species.

H. KALMUS

FINGER PRINTS

Galton, Francis. *Finger Prints.* Unabridged republication of the 1892 edition. New preface by **Harold Cummins.** New York, 1965. Da Capo Press. Pp. XXIII+xvi+216. Price $6.95.

IT IS, OF course, an accepted fact of life that identity of finger prints establishes without doubt the identity of their makers. One wonders how many people realize that Galton, among his many contributions to knowledge, enunciated and ratified in this book, first published in 1892, the principle: "complete or nearly complete accordance between two prints of a single finger . . . affords evidence requiring no corroboration, that the persons from whom they are made are the same". If for no other reason than that it is a major pioneer work in criminology this late nineteenth-century book, now re-edited so beautifully, is well worth reading. But there are other reasons.

This reviewer had on a former occasion been delighted by the vivid precision of Galton's writing in his slightly earlier book, *Inquiry into Human Faculty*. This book shows equally well Galton's superb yet simple command of language, his aptness of simile and his ingenuity and persuasiveness of illustration. He is a master of clear expression. Would that there were more of them nowadays.

It is most fitting that this new edition of Galton's book should have been produced at this time under the guidance of Professor Cummins of Tulane University. Whereas in the past dermal ridge patterns have chiefly concerned the criminal detective, within the last few years they have become of great interest to those who study human disease, especially the chromosome disorders. In these disorders the dermal ridge patterns depart from normal to the extent that they can be used for clinical diagnosis. The first recognition of this fact was made by Professor Cummins thirty years ago.

In scientific work much is ephemeral. Methods are developed, are used for a time and are discarded. This book shows how good work may stand the test of time. The arch, loop, whorl system of classification and the recognition of triradii set forth by Galton are the foundations on which the new science of clinical dermatoglyphics rests.

The type in which this book is set and the paper used are most pleasing. It is a fascinating little book.

G. H. VALENTINE

ZOOLOGY

Morris, Ramona and **Desmond.** *Men and Apes.* London, 1966. Hutchinson. Pp. viii+271. Price 50s.

THIS IS A delightful book, a classic of its kind, which is calculated to appeal both to the professional zoologist and to the general reader. It concerns what may be termed the ideology of man in relation to the apes, apes here being read as including monkeys as well as man-like apes. This is the effort of a happy man and wife combination. Dr. Morris is a zoologist, specializing in animal behaviour research, who is also a painter and his wife Ramona is a historian who has spent a number of years scripting and researching on animal programmes for television. Here is displayed great erudition, combined with qualities of readability and liveliness, which passes in review man's ideas, more often illusions, about the nature of his nearer relatives in the animal world from the earliest times down to the present. The mythology of the apes is highly entertaining and often bizarre and it is salutary